Remarks

Claims 1-4, 6-7, 9, 13-18, 21-24, 26 and 40-59 are pending. Claims 1-4, 44-53 and 54-59 are withdrawn from consideration. Claims 5, 8, 10-12, 19-20, 25, and 27-39 were previously cancelled without prejudice or disclaimer.

The claims have been amended in view of the official action and to more accurately state what Applicant believes to be his invention. In particular, independent Claim 40 has been amended to claim an anode for an electrochemical cell comprising a battery grade zinc powder comprising zinc metal or zinc alloy particles, said zinc metal or zinc alloy particles having a length between 8 and 22 times the diameter and a particle size distribution with a log normal slope of 2, the zinc powder being suspended in a fluid medium. A similar amendment was introduced in dependent Claims 13, 14, and 18. In this regard, it should be understood that given the irregular cross sectional shape of the particles in question, diameter as used in Claim 40 of the present application should be understood as, when viewing a cross section of a particle lying on a plane arranged substantially at right angles to the length of the particle, the distance between two points lying on the perimeter which are farthest apart. No new subject matter has been added by the foregoing amendments. Indeed, support for the amendments can be found, for example, in paragraph [0044] of the specification as filed, the claims as filed and the Figures.

REJECTION UNDER 35 U.S.C. § 102

Claims 9, 13–18 and 40-43 have been rejected as being anticipated by U.S. Patent Application Number 2002/0155352 by Durkot *et al.* under 35 U.S.C. § 102. Applicant respectfully submits that Claim 40 as amended overcomes this objection in view of the following argument.

> MPEP §2131 provides:
> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or

inherently described, in a single prior art reference." [emphasis added]

Durkot *et al.* teaches an electrochemical cell with an anode comprising zinc alloy particles suspended in a fluid medium. The zinc alloy particles may have non-spherical shapes, such as flakes or acicular particles. Appropriate acicular shapes have a length L_1 along a major axis at least two times a length L_2 along a minor axis. Appropriate flake-form particles have an average thickness between their broad sides of no more than about 20% of the maximum linear dimension of the particles in order to have a very low volume to surface area ratio (see paragraphs [0018] and [0042]).

However, Durkot *et al.* fails to teach an anode for an electrochemical cell comprising a battery grade zinc powder comprising zinc metal or zinc alloy particles, said zinc metal or zinc alloy particles having a length between 8 and 22 times the diameter and a particle size distribution with a log normal slope of 2, the zinc powder being suspended in a fluid medium, as is the case of the present invention as claimed in amended Claim 40. Indeed, Applicant respectfully submits that the Examiner was mistaken in relying on Durkot *et al.* as teaching the aspect ratio of the present invention as claimed.

Indeed, as discussed above, the diameter of a particle as claimed at amended Claim 40 is the distance between two points, which are furthest from each other on the perimeter of a cross-section of the particle. In the case of particles approaching a flat shape, and in particular for flake-form particles which have a very thin cross-section, it would be apparent to a person skilled in the art that the diameter translates into the width and not the thickness of the particle, as the thickness in this case is very small in comparison to the particle's width. Accordingly, when measuring the aspect ratio of flake-form particles using the method of the present invention as claimed in amended Claim 40, such a ratio would not be computed as the ratio of the average thickness between the particle's broad sides to its maximum dimension, as is the case in Durkot *et al.* (see paragraph [0042]) but rather as

the ratio of the average width of the particle to its maximum dimension. As a result, it is respectfully submitted that the aspect ratio of the flake-form particles of Durkot *et al.* relied on by the Examiner cannot constitute anticipation of the aspect ratio as claimed in amended Claim 40. Thus, Durkot *et al.* does not teach or suggest each and every element as set forth in Claim 40 and as such the claim is allowable.

Applicant further submits that the ranges taught by Durkot *et al.* are broad and as such cannot constitute an anticipation of the narrower range claimed in amended Claim 40. Indeed, the acicular particles of Durkot *et al.* have a ratio of the length along the major axis (L_1) to the length along the minor axis (L_2) of at least 2 while the flake-form particles of Durkot *et al.* have an average thickness between their broad sides of no more than about 20% of the maximum linear dimension, resulting in an aspect ratio of about 5.

> In this regard, MPEP §2131.03 II. provides:
> "In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." [...] If the claims are directed to a narrow range, and the reference teaches a broad range, [...] it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims." [emphasis added]

Applicant submits that Durkot *et al.* does not disclose the narrower range (between 8 and 22) of the present invention as claimed at amended Claim 40 with "sufficient specificity". The ranges taught by Durkot *et al.* are indeed quite broad (e.g. at least 2 for acicular particles and greater than about 5 for flake-form particles) and nowhere in Durkot *et al.* is there mention of a high average aspect ratio in the narrower range between 8 and 22. As a result, Applicant submits that there is no basis for the objection as Durkot *et al.* does not constitute an anticipation of the subject matter as claimed under the statute.

In light of the above, Applicant respectfully submits Durkot *et al.* fails to disclose, teach, or suggest each and every element of amended Claim 40. Thus, independent Claim 40 as amended is not anticipated by Durkot *et al.* and Claim 40 is an allowable claim. As all the remaining objected claims depend from an allowable claim, Applicant submits that they, too, are allowable claims.

REJECTION UNDER 35 U.S.C. § 103

Claims 6 and 7 have been rejected as being unpatentable over Durkot *et al.* in view of International Publication Number 98/50969 by Urry *et al.* under 35 U.S.C. § 103. Claims 21-24 and 26 have been rejected as being unpatentable over Durkot *et al.* in view of U.S. Patent Number 7008723 by Daniel-Ivad *et al.* under 35 U.S.C. § 103. Applicant respectfully submits that Claim 40 as amended overcomes this objection in view of the following argument.

> MPEP §2142 provides:
> "To establish a *prima facie* case of obviousness, [...] the prior art reference (or references when combined) must teach or suggest all the claim limitations." [emphasis added]

Urry *et al.* teaches an electrochemical cell, which contains both a cathode and an anode. The anode contains a mixture of uniformly shaped particles and electrolyte. It may also contain a zinc powder comprising non-uniform shaped particles, which can be mixed with the uniformly shaped particles.

Daniel-Ivad *et al.* teaches a method of manufacturing an anode composition for use in an electrochemical cell, the anode comprising an electrochemically active material, such as zinc.

Applicant respectfully submits that the Examiner failed to establish a *prima facie* case of obviousness. Indeed, neither Durkot *et al.*, Urry *et al.*, nor Daniel-Ivad *et al.*, taken alone or in combination, teach all the claim limitations of amended Claim 40. In view of the arguments provided herein above, none of the prior art references teach an anode for an electrochemical cell comprising a battery grade zinc powder comprising zinc metal or zinc alloy particles, said zinc metal or zinc alloy particles having a length between 8 and 22 times the diameter and a particle size distribution with a log normal slope of 2, the zinc powder being suspended in a fluid medium, as set forth in independent Claim 40 as amended. Thus, modifying the references in the manner suggested by the Examiner would not result in the invention as claimed. The subject matter of Claim 40 as amended therefore involves an inventive step over the prior art and Claim 40 is not obvious. As a result, Claim 40 as amended is an allowable claim. As all the remaining objected claims depend from an allowable claim, Applicant submits that they, too, are allowable claims.

Applicant would also like to bring to the Examiner's attention that the corresponding European case, now granted as European Patent Number 1539411, was issued with a claim similar to Claim 40 as amended. Applicants thus submits that amended Claim 40 is allowable and the rejection should be withdrawn.

The foregoing is believed to represent a full response to the Office Action. The application is believed to be in condition for allowance and early and favourable action would be appreciated.

The Examiner is invited to telephone the undersigned (at direct line 928-226-1073) for prompt action in the event issue(s) remain that prevent the allowance of all pending claims.

Application No. 10/634,651

The Director of the U.S. Patent and Trademark Office is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-3204 of John Bruckner PC.

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PO Box 490
Flagstaff, AZ 86002
Tel. (928) 226-1073
Fax. (928) 266-0474

Respectfully submitted,
John Bruckner PC
Attorneys for Applicant

John J. Bruckner
Reg. No. 35,816